

SDMS Document ID



1000239



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REMARKS From Michael Cohan, Geo Science  
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## **ASTM JOHNSON CONFERENCE**

JULY 21 - 25 2002

# **A Review of Asbestos Monitoring Methods and Results for the New York World Trade Center, Libby Vermiculite, and Fibrous Talc**

Sponsored by

ASTM Committee D22 On Sampling and Analysis of Atmospheres

Johnson State College  
Johnson, Vermont

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Research Triangle Park, NC

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Poestenkill, NY

**ASTM Johnson Conference on  
A Review of Asbestos Monitoring Methods and Results for  
The New York World Trade Center, Libby Vermiculite, and  
Fibrous Talc**

July 21 - 25, 2002

Johnson State College  
Johnson Vermont

**INTRODUCTION**

**Asbestos** has been a major environmental concern for the past 50 years. Regulations to control exposure to asbestos fibers have been implemented by OSHA, EPA, MSHA, as well as various state and local agencies. In spite of these regulations, asbestos is continually the subject of controversy in the media. Six minerals are included in commercial and regulatory definitions of asbestos. These minerals are regulated because they have been found to cause lung diseases such as asbestosis or cancer when inhaled. Asbestos used in building materials and commercial products are sometimes a source of exposure through use and/or misuse. Asbestos-containing building materials used at the New York World Trade Center were a source of exposure concern while the buildings were under construction and have become a concern again since the September 11, 2001 disaster. Vermiculite from the mines in Libby, Montana is reported to contain fibers of richterite and winchite, which are unregulated but are suspected of causing widespread disease. Some investigators argue that fibers with asbestos-like physical properties should also be included in the asbestos regulations. Fibrous talc has often been the subject of debate since many fibers in the talc are said to have properties similar to those of regulated asbestos. There should be clear evidence that a substance such as a mineral fiber causes an adverse health effect before it is regulated.

This conference will focus on monitoring methods, data, and interpretation of results associated with the World Trade Center, Libby vermiculite, and fibrous talc. Other recent developments and topics on asbestos monitoring methods will also be presented. Presentations will include information on what we think we know, what we think we understand, and what we need or would like to know about asbestos exposure associated with these sources. Previous ASTM conferences in Johnson, Vermont in 1986, 1988, 1992, and in Boulder, Colorado in 1997 have served as benchmarks for asbestos monitoring methods. These conferences have been a major contributor to the advancement and understanding of asbestos monitoring technology.

Presentations made at this conference will contain the most current data and conclusions. Citations of the work presented may be made only with the written permission of the authors. This is done to encourage the presentation of the most recent work in the field and to allow discussion of new ideas and possible interpretations of the data.

Join us for the biannual **ASTM Committee D 22 Johnson Conference** where experiences are shared, issues raised, and learning accelerated. The conference will convene mornings and evenings on the campus of Johnson State College in Johnson, Vermont. The afternoons will be open to allow attendees to explore the beautiful Vermont countryside. The program is designed to provide a forum for presenting and discussing current issues of concern in environmental monitoring. Open discussion will follow each presentation. There will be no publication of the proceedings of this conference. Attendance at the conference will allow you to meet each presenter and pose questions and concerns directly to them.

## **WHO SHOULD ATTEND**

Professionals and laypersons with developing interests about asbestos at the World Trade Center, asbestos in vermiculite from Libby, Montana, and fibrous components in talc will want to attend. This includes environmental consultants, laboratory analysts and managers, and federal, state and local government officials responsible for reviewing and making decisions based on the findings of these studies.

## **SUBJECT MATTER OF THE CONFERENCE**

The primary purpose of the conference will be to present and discuss data from asbestos monitoring associated with the World Trade Center vermiculite mined and processed from Libby, and fibrous talc. Asbestos monitoring strategies, analytical methods, data interpretation, and quality assurance procedures will be discussed. Other developments in asbestos monitoring techniques will also be discussed.

## **DRESS CODE FOR THE CONFERENCE**

The conference will be held in the chemistry auditorium of Bentley Hall on the campus of Johnson State College in Johnson, Vermont. The chemistry auditorium in Bentley Hall is not air-conditioned. The weather in Johnson in July is quite pleasant and air conditioning is not usually needed. However, to insure the comfort of the participants, we strongly recommend casual attire for both presenters and attendees.

Jeans, shorts, and t-shirts will insure your comfort and will help you to blend in with the students. Coats and ties are strongly discouraged! [The conference chairs will have scissors on hand to assist in making any needed adjustments to your wardrobe!]

## WEB LINKS

Information about ASTM and Committee D 22 on Sampling and Analysis of Atmospheres may be found at <http://www.astm.org/>

To learn more about the Johnson State College and the Town of Johnson, you may want to visit the following websites

Johnson State College <http://www.jsc.vsc.edu/>

Johnson, Vermont <http://170.222.200.76/johnson/>

**MONDAY**  
**July 22, 2002**

8 30 A M     Welcome and Opening Remarks Michael E Beard, and Harry L Rook

**Session I     Monitoring at the World Trade Center**

Morning Session     Roger A Morse  
Chair                     Morse Associates, Poestenkill, NY

8 45 A M     Fireproofing and Asbestos in the World Trade Center --R A Morse  
Morse Associates, Poestenkill, NY

9 15 A M     Asbestos in Settled Dust Concentrations Outdoors in New York City  
Before September 11, 2001--W M Ewing, Compass Environmental Inc  
Kennesaw, GA

9 45 A M     Characterization of Settled Dust Resulting from the World Trade Center  
Tragedy September 11 2001-- J R Millette MVA, Inc , Norcross GA

10 15 A M     Break

10 30 A M     Characterization of Particulate Found in Apartments after Destruction of  
the World Trade Center -- E J Chatfield, Chatfield Technical Consulting,  
Mississauga, ONT, Canada, and J R Kominsky, Environmental Quality  
Management, Inc , Cincinnati, OH

11 00 A M     Asbestos in Street-Water Run-Off And Roof Tanks near the World Trade  
Center Disaster - J S Webber and L Carhart, New York State  
Department of Health Albany, NY

11 30 A M     Inorganic Geochemistry of Dusts Deposited in Lower Manhattan after the  
September 11, 2001, World Trade Center Collapse -- Geoffrey S  
Plumlee US Geological Survey, Denver, CO

12 00 Noon     Discussion of World Trade Center Monitoring

12 30 P M     Adjourn

**Session II    Monitoring at the World Trade Center**

Evening Session    Thomas R. McKee  
Chair                Scientific Laboratories, Inc, Midlothian, VA

- 7 00 P M    Health Risks from Exposures to Asbestos, Inorganic Metals, and Various Chemicals Due to Collapse of the World Trade Center    An Environmental Residential Survey with a Commentary Related to Ground Zero Workers – E. B. Ilgren, Consultant, Bryn Mawr, PA
- 7 30 P M    The Protocol for Assessing Asbestos-Related Risk    A Status Report -- D. W. Berman, Aeolus, Inc, Albany, CA
- 8 00 P M    Mineralogical and Geochemical Function on the Health Effects of Asbestos Mineral Dusts    Insights from a Comparison of 24 Asbestos Toxicological Standards -- T. L. Ziegler, P. J. Lamothe, G. P. Meeker, I. K. Brownfield, H. Lowers, T. K. Hinkley, G. S. Plumee, M. L. Witten    US Geological Survey, Denver, Co, And N. Nsun, University of Arizona, Tucson, AZ
- 8 30 P M    Break
- 8 45 P M    Asbestos Burden in Tissue    Knowns And Unknowns – R. F. Dodson    University of Texas Health Center at Tyler, Tyler, TX
- 9 15 P M    Microanalysis and Materials Characterization of Dusts Generated by the World Trade Center Collapse – G. P. Meeker, S. J. Sutley, G. A. Swayze, T. M. Hoefen, R. N. Clark, I. K. Brownfield, and C. Gent, US Geological Survey, Denver, CO
- 9 45 P M    Discussion    What Have We Learned from the World Trade Center Disaster?
- 10 30 P M    Adjourn



**TUESDAY**  
**July 23, 2002**

**8 30 A M** Welcome and Opening Remarks Michael E Beard, and Harry L Rook

**Session III Monitoring Libby Vermiculite**

**Morning Session** James S Webber  
**Chair** New York State Department Of Health, Albany NY

**8 45 A M** Libby A Historical Perspective – W M Ewing, Compass Environmental Inc , Kennesaw, GA

**9 15 A M** Sampling and Analysis of Vermiculite-Containing Consumer Products for Asbestos Contamination – L J Phillips, D Nelson, J Buchert, S Schwartz, Versar, Inc , Springfield, VA, and T Simons, USEPA Washington, DC

**9 45 A M** Review of EPA Studies on Consumer Garden Products that Contain Vermiculite – E J Chatfield, Chatfield Technical Consulting, Mississauga ONT, Canada

**10 15 A M** Break

**10 30 A M** Strategies for Determination of Asbestos in Vermiculite – E J Chatfield Chatfield Technical Consulting, Mississauga, ONT, Canada

**11 00 A M** Optical and Morphological Characterizations of Amphibole and Amphibole-Asbestos Collected from the Former Vermiculite Mine near Libby, Montana, U S A -- M E Gunter, B R Bandli, and B M Brown Department of Geological Sciences, University of Idaho, Moscow, ID

**11 30 A M** Analytical Methods and Quality Assurance in Vermiculite Testing -- John Addison, John Addison Consultancy, Cottingham, East Yorkshire , UK

**12 00 Noon** Discussion of vermiculite issues

**12 30 P M** Adjourn

**Session IV Analysis Of Fibrous Talc**

Evening Session      Jennifer R Verkouteren  
Chair                      National Institute of Standards and Technology, Gaithersburg, MD

- 7 00 P M      Analysis of Crayons for Asbestos and other Fibrous Materials – O S Crankshaw, M E Beard, And J T Ennis, Research Triangle Institute Research Triangle Park, NC
- 7 30 P M      Critical Issues in the Identification of Asbestos - Whatever the Mineral Species -- R J Lee D Veblen, and D Van Orden, RJ Lee Group, Inc Monroeville, PA
- 8 00 P M      The Health Experience of Vanderbilt Talc – J Kelse, R T Vanderbilt Co Inc , Norwalk, CN
- 8 30 P M      Break
- 8 45 P M      The Optical Properties and Chemical Composition of Fibrous Talc – W Greenwood and A G Wylie, University of Maryland College Park, MD
- 9 15 P M      Reconstructing a Century of Airborne Asbestos Concentrations in the Talc-Mining Region of New York State Tales from the Muck – J S Webber, New York State Department of Health Albany NY
- 9 45 P M      Discussion of talc analysis
- 10 30 P M      Adjourn

Wednesday  
July 24, 2002

8 30 A M Welcome and Opening Remarks Michael E Beard, and Harry L Rook

**Session V Analysis Of Fibrous Talc**

Morning Session Robert L Perkins  
Chair Research Triangle Institute (Retired), Lillington, NC

8 45 A M Geologic Origins of the "Transitional Fibers" in Fibrous Talc Deposits --B  
S Van Gosen and G P Meeker, US Geological Survey, Denver, CO

9 15 A M Mineralogy and Experimental Animal Studies of Tremolitic Talc -- G L  
Nord, C W Axlen, M Ross, And R P Nolan, Brooklyn College of the City  
University of New York, Brooklyn, NY

9 45 A M Analyzing Non-Asbestos Asbestiform Minerals -- D T Crane, OSHA Salt  
Lake City, UT

10 15 A M Break

10 30 A M Limitations of Methods for Determination of Asbestos in Talc -- E J  
Chatfield, Chatfield Technical Consulting, Mississauga, ONT Canada

11 00 A M Discussion of talc analysis

12 30 P M Adjourn

No Evening Session

Thursday  
July 25 2002

8 30 A M Welcome and Opening Remarks Michael E Beard, and Harry L Rook

**Session VI Asbestos Analysis – General Topics**

Morning Session Eric J Chatfield

Chair Chatfield Technical Consulting, Mississauga, ONT, Canada

8 45 A M Optical Characteristics and Mineralogy of "Environmental Amphibole Asbestos – J R Verkouteren, National Institute of Standards and Technology, Gaithersburg, MD and A G Wylie University of Maryland College Park MD

9 15 A M Tremolite Analysis of Chrysotile Containing Friction and Gasket/Packing Products – W E Longo, W Egeland, R Hatfield, R Stapleton and J Hubbard, Materials Analytical Services Inc , Suwanee GA

9 45 A M Revisiting Refractive Index Measurements – P M Cooke, MICA Chicago IL

10 15 A M Break

10 30 A M Asbestos Impurities in Olivines – G Burdett, Health and Safety Laboratory, Broad Lane, Sheffield, UK

11 15 A M An Assessment of the Airborne Release of Asbestos Fibres from Olivine Grits – G Burdett, Health and Safety Laboratory Broad Lane Sheffield UK

11 45 A M Discussion

12 30 Noon Lunch

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**Session VII Asbestos Analysis – General Topics**

Evening Session     Gregory P. Meeker  
Chair                     US Geological Survey, Denver, CO

- 7 00 P M     The Quality of Fiber Count Data of Slides with Relocatable Fields – T. W. S. Pang, Ryerson Polytechnic University, Toronto, ONT
- 7 30 P M     Enhancement of the Quality of Asbestos Fiber-Counting Analyses by Means of Certified Reference Slides – M. Harper, University of Alabama at Birmingham, Birmingham, AL, M. E. Beard, Research Triangle Institute Research Triangle Park, NC, and J. H. Nelson, DataChem Laboratories Salt Lake City, UT
- 8 00 P M     Polarized Light Microscopy: What Does It Mean for Asbestos? -- D. W. Berman, Aeolus, Inc., Albany, CA
- 8 30 P M     Break
- 8 45 P M     The European Method for Measuring Asbestos in Bulk Materials -- G. Burdett, Health and Safety Laboratory, Broad Lane, Sheffield, UK
- 9 15 P M     A PLM Method for Quantitative Analysis of Amphibole Asbestos in Bulk Materials at 0.01 Weight % -- J. R. Verkouteren, National Institute of Standards and Technology, Gaithersburg, MD and A. G. Wylie, University of Maryland, College Park, MD
- 9 45 P M     Discussion – Conference Wrap-Up
- 10 30 P M     Adjourn

Friday  
July 26, 2002

8 30 A M     ASTM Committee D22 Meeting